

**BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA**

DOCKET NO. 2011-271-E

In the Matter of:)	
)	
Application of Duke Energy Carolinas,)	CORRECTED
LLC for Authority to Adjust and Increase)	DIRECT TESTIMONY OF
Its Electric Rates and Charges)	CATHERINE E. HEIGEL FOR
)	DUKE ENERGY CAROLINAS, LLC

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION**
3 **WITH DUKE ENERGY.**

4 A. My name is Catherine E. Heigel and my business address is 40 West Broad Street,
5 Greenville, South Carolina 29601. I am President of Duke Energy Carolinas, LLC
6 (“Duke Energy Carolinas” or “Company”) for South Carolina. Duke Energy
7 Carolinas is a subsidiary of Duke Energy Corporation (“Duke Energy”).

8 **Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES AS PRESIDENT**
9 **OF DUKE ENERGY CAROLINAS FOR SOUTH CAROLINA?**

10 A. I am responsible for advancing the Company’s rate and regulatory initiatives and
11 managing state and local regulatory and governmental relations, economic
12 development and community affairs. I am responsible for the execution of our
13 rates, regulatory, and legislative strategy in South Carolina.

14 **Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATIONAL AND**
15 **PROFESSIONAL BACKGROUND.**

16 A. I graduated magna cum laude, Phi Beta Kappa and with Honors from the
17 University of South Carolina with a Bachelor of Arts degree in International
18 Studies. I hold a Juris Doctor degree from The Ohio State University College of
19 Law, where I was an associate editor of the Ohio State Law Journal. I also
20 completed the Advanced Management Program at the Wharton School of Business;
21 the Leadership at the Peak Program at the Center for Creative Leadership; the Duke
22 Energy Strategic Leadership Program at the University of North Carolina’s Kenan-
23 Flagler School of Business; and Oxford University’s Summer Law Programme.

1 I have been in my current position since March 2010. Prior to that, I served
2 briefly as a special advisor to Duke Energy's Chairman, President and Chief
3 Executive Officer, James E. Rogers. Before taking the special assignment
4 supporting Mr. Rogers, I worked since 2006 in the state regulatory group for
5 Duke Energy's U.S. Franchise Electric and Gas organization. In that role, I
6 advised the company's senior management on regulatory and compliance matters.
7 I also represented Duke Energy in a wide variety of issues before state utility
8 commissions, including energy efficiency and general rate proceedings.

9 I began my legal career in 1995 with the Department of Consumer Affairs,
10 Consumer Advocate Division working as a consumer advocate for the State of
11 South Carolina in utility and insurance regulatory matters. I joined Duke Energy
12 in 1997 as senior counsel providing legal support for Duke Engineering &
13 Services (DE&S), a non-regulated engineering consulting services subsidiary of
14 Duke Energy. From 2003 to 2006, I practiced law in the private sector.

15 I am admitted to the state bar associations of South Carolina, North
16 Carolina, Georgia, Ohio and New York, and am a member of the American Bar
17 Association. I am a member of the South Carolina Centers of Economic
18 Excellence Review Board, the Palmetto Business Forum and the University of
19 South Carolina's President's Initiatives Committee. I also serve on the board of
20 the South Carolina Manufacturers Alliance, Meals on Wheels of Greenville
21 County, the Greenville Symphony Orchestra, the Palmetto Conservation
22 Foundation, The Nature Conservancy – South Carolina chapter, and the ETV
23 Endowment of South Carolina.

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¹ *Application of Duke Energy Carolinas, LLC for Authority to Adjust and Increase Its Electric Rates and Charges, Docket No. 2009-226-E* (“2009 Rate Case”).

- 1 2. **Jim L. Stanley**, Senior Vice President, Power Delivery, who discusses the
2 Company's power delivery operations and provides an update to our
3 modernization programs for the Company's transmission and distribution
4 infrastructure. He also discusses the Company's reliability performance, as
5 well as our initiatives and performance in this area.
- 6 3. **Stephen G. De May**, Senior Vice President, Investor Relations and
7 Treasurer, who addresses the Company's financial objectives, capital
8 structure, and cost of capital.
- 9 4. **Robert Hevert**, President of Concentric Energy Advisors, who presents his
10 independent analysis of the Company's cost of equity. Additionally,
11 Witness Hevert makes a recommendation for an allowed rate of return on
12 equity that is fair and that allows the Company to both attract capital on
13 reasonable terms and maintain financial strength.
- 14 5. **J. Danny Wiles**, Vice President, Franchise Electric and Gas Accounting,
15 describes the financial position of Duke Energy Carolinas at December 31,
16 2010, and actual results of the Company's operations for the calendar year
17 ending December 31, 2010, which is the Test Period for this filing. He also
18 addresses our depreciation expense and nuclear decommissioning costs
19 recorded in the Test Period.
- 20 6. **Phillip O. Stillman**, General Manager, Regulatory Accounting and
21 Planning, who supports the allocation of total company revenue
22 requirements to the South Carolina retail jurisdiction and to each customer
23 class.

- 1 7. **Jane L. McManeus**, Managing Director, Rates, who supports the base fuel
2 factor. In addition, she provides the accounting adjustments necessary to
3 annualize and normalize test period revenues and fuel costs and adjust for
4 costs and revenues recovered through non-fuel riders.
- 5 8. **Carol E. Shrum**, Vice President, Rates, who describes the results of Duke
6 Energy Carolinas' operations under present rates on the basis of an adjusted
7 historical test period using the twelve months ended December 31, 2010.
8 Ms. Shrum details the additional revenue required as a result of the cost
9 increases since the 2009 Rate Case, and discusses several adjustments to the
10 end of year rate base. Finally, Ms. Shrum presents the pro formas to
11 estimate the costs to be recovered by the Company for actual costs incurred
12 in 2011 through the anticipated hearing date for this case.
- 13 9. **Jeffrey R. Bailey**, Director, Pricing Design and Analysis, who discusses the
14 Company's proposed rate design and tariffs. He also describes the proposed
15 changes to the retail tariffs and quantifies the effects of those changes on our
16 customers.

17 **B. Overview**

18 **Q. PLEASE GIVE AN OVERVIEW OF DUKE ENERGY CAROLINAS'**
19 **ELECTRIC UTILITY SYSTEM AND OPERATIONS.**

20 A. Duke Energy Carolinas is South Carolina's second largest investor-owned electric
21 utility in terms of the number of retail customers served, the size of our service
22 territory, the size of our power production system, and the size of our transmission
23 and distribution system. In 2010, we provided retail electric service to
24 approximately 2.4 million retail customers throughout a 24,000 square mile service

1 territory in Western South Carolina and the Central and Western portions of North
2 Carolina. Approximately 600,000 of our retail customers are in South Carolina.
3 Our retail customers include residential, commercial, institutional, governmental,
4 and industrial customers. Manufacturing continues to be an important contributor to
5 the economy in our region, with the rubber and plastic products, chemicals, paper
6 products, and automotive industries also being of major significance to our service
7 territory's economy. Although textile manufacturing has become a smaller
8 percentage of our industrial load, it still plays a significant role in our region, as do
9 the real estate and education services sectors. The major South Carolina customer
10 concentrations in our territory include Greenville, Spartanburg, Fort Mill, and
11 Anderson.

12 To generate the power to serve these customers, Duke Energy Carolinas
13 owns and operates three nuclear generating stations (two owned outright and one
14 owned partially), eight coal-fired generating stations, twenty-eight hydroelectric
15 stations, and eight gas-fired combustion turbine generating stations. Altogether,
16 these generating facilities are capable of producing approximately 19,000 megawatts
17 ("MWs") of electricity. The Company also makes long-term and spot market
18 purchases of electricity to ensure economical and reliable service to our customers.
19 The testimony of Witness Jamil provides further detail on our power supply
20 resources.

21 To transmit and distribute this power, Duke Energy Carolinas owns and/or
22 operates approximately 13,000 circuit miles of transmission lines, over 1,600
23 substations, over 100,000 miles of distribution lines, and is interconnected with eight
24 other electric utilities. Witness Stanley's testimony provides additional detail on our

1 power delivery operations. In addition, the Company has 41 operations centers
2 throughout our South Carolina and North Carolina service territories from which we
3 provide service to our customers.

4 **Q. PLEASE SUMMARIZE THE DRIVERS FOR THE COMPANY'S RATE**
5 **REQUEST.**

6 A. This case is driven by the \$6.5 billion of capital invested in the "bricks and mortar"
7 projects of the Company, including our modernization program that consists of
8 retiring, replacing and/or upgrading generation plants and transmission and
9 distribution systems. Our modernization program is necessary to enable us to
10 continue safely providing reliable and environmentally compliant electricity at
11 reasonable costs for our customers. Accordingly, this case is largely a continuation
12 of our modernization strategy that underpinned the 2009 Rate Case. Both across the
13 country and in the Carolinas, utilities are taking steps to address aging power plants.
14 This effort is even more important to Duke Energy Carolinas, given the approximate
15 average ages of our generation and power delivery systems: coal-fired power plants
16 (61 years old); nuclear generation system (30 years old); hydroelectric (79 years
17 old); transmission and distribution system (certain major components range in age
18 between approximately 30 and 40 years old). The need to modernize our system is
19 also driven by ever-increasing environmental compliance requirements such as the
20 need for emission controls to comply with increasingly stringent state and federal
21 emission regulations.

22 In addition to the large capital investments the Company has made in its
23 electric system since the 2009 Rate Case, our costs tied to the existing system
24 continue to rise. The result is that the rates our customers pay today are not adequate

1 to recover the Company's costs to operate and maintain the existing system. When
2 current revenues become insufficient to cover the cost of operating and maintaining
3 a safe and reliable electric system, it is time to realign customer rates with costs to
4 serve them. Accordingly, the Company's requested rate increase better aligns the
5 Company's rates with its costs to serve customers.

6 **Q. PLEASE EXPLAIN HOW THE COMPANY'S APPLICATION SUPPORTS**
7 **THE COMPANY'S CORPORATE MISSION?**

8 A. Our mission is to improve the lives of our customers by providing low cost and
9 reliable electricity in a sustainable way today and into the future. To achieve this
10 mission on behalf of our customers, the Company has invested significant capital to
11 modernize the Carolinas' electric system and comply with increasingly stringent
12 environmental mandates. To ensure we maintain the financial strength the Company
13 needs to continue to compete for the capital our business requires, we must begin
14 recovery of these dollars now. We accomplish this, in part, by better aligning the
15 rates our customers pay with the costs to serve them. Consistent with our mission to
16 make people's lives better by providing electric services in a sustainable way, we
17 make the following commitments in this case:

- 18 (1) We will maintain a safe and reliable electricity supply.
- 19 (2) We will continue to deliver excellent customer service that is accessible and
20 convenient.
- 21 (3) We will continue to be good stewards of the state's natural resources by
22 complying with all environmental rules and regulations. We will continue to
23 invest and spend money prudently to meet our legal obligations.

1 (4) We will maintain competitive prices. As we make investments to modernize
2 our system and comply with federal mandates, we do so with long-term
3 competitive rates in mind. Investments in our system today help to ensure
4 low cost reliable power in the future. After this rate case, our customers'
5 rates will remain below the national average and competitive in the
6 Southeast, even during a period of increasing costs for Duke Energy
7 Carolinas.

8 **III. EXPLANATION OF RATE REQUEST**

9 **Q. PLEASE DESCRIBE THE CAPITAL INVESTMENTS MADE BY THE**
10 **COMPANY AS PART OF ITS MODERNIZATION PROGRAM.**

11 A. Including pro-forma adjustments in this rate case, Duke Energy Carolinas has made
12 capital investments of \$6.5 billion in its electric system for plant modernization,
13 environmental compliance and other capital additions. This total includes the
14 following major projects or categories:

15 New Plant:

- 16 A. Cliffside Unit 5 Scrubber (\$565 million);
17 B. Buck Combined Cycle Project (\$700 million);
18 C. Tornado/High Energy Line Break work at Oconee Nuclear Station (\$135
19 million for the phase I in-service investment);
20 D. Bridgewater Powerhouse Replacement Project (\$180 million);
21 E. Generation Maintenance and Nuclear Fuel (approximately \$1.4 billion);
22 F. Transmission and Distribution Plant (approximately \$1 billion); and
23 G. Other General Plant projects (\$240 million).
24

1 Construction Work In Progress:

2 H. Cliffside Unit 6 (\$676 million additional investment);

3 I. Tornado/High Energy Line Break work at Oconee Nuclear Station (\$534
4 million for the phase II investment);

5 J. Dan River Combined Cycle Project (\$415 million);

6 K. Other Nuclear, Fossil, Hydro, and Combustion Turbine (\$378 million);

7 L. Transmission, Distribution, and Other General Projects (\$251 million).

8 **Q. WHAT IS THE RATE INCREASE PROPOSED BY DUKE ENERGY**
9 **CAROLINAS?**

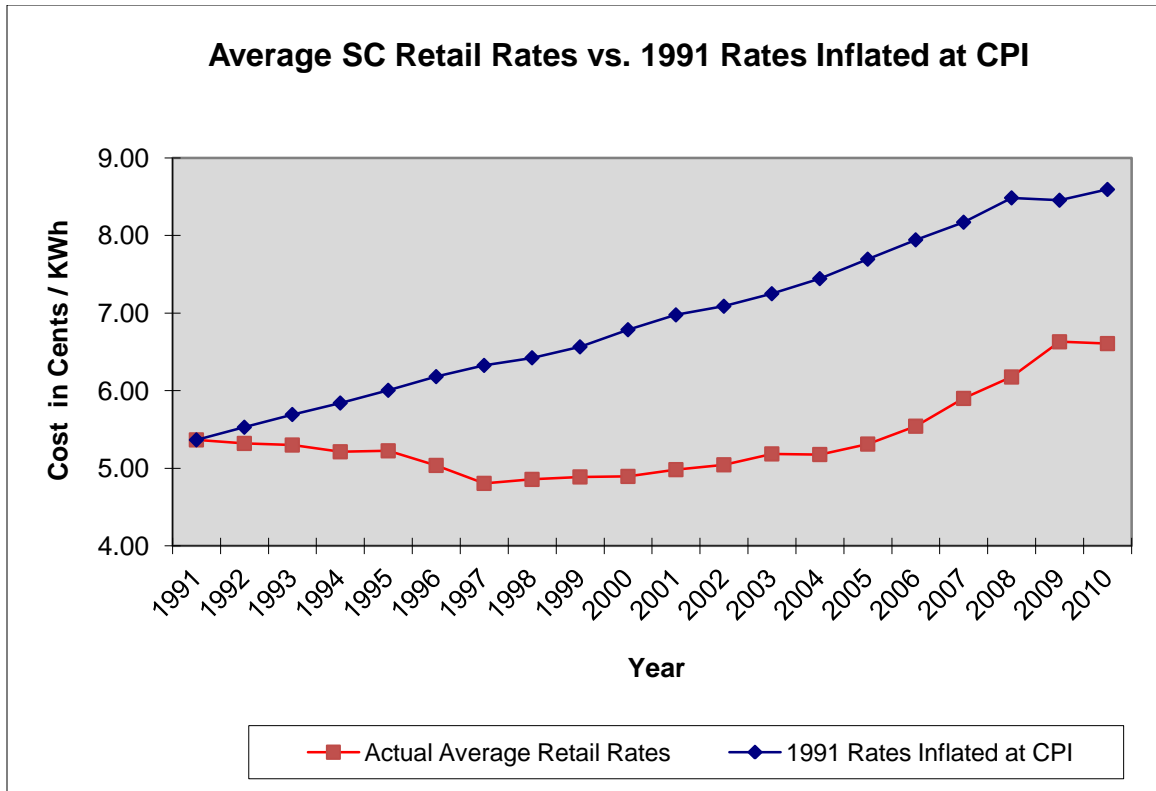
10 A. Duke Energy Carolinas is seeking to increase its retail revenues by approximately
11 \$216 million, which represents an overall 14.6% increase in rates. The majority of
12 our requested increase is related to investments in new plant as described above. On
13 a South Carolina jurisdictional basis, our gross rate base additions include new plant
14 additions of approximately \$134 million for the Cliffside Unit 5 scrubber, \$166
15 million for the Buck Combined Cycle Plant, \$32 million for the Tornado/High
16 Energy Line Break (“HELB”) work at Oconee Nuclear Station, \$43 million for the
17 Bridgewater Powerhouse Replacement, \$223 million for General Maintenance and
18 Nuclear fuel, \$214 million for costs associated with transmission and distribution,
19 and \$54 million for other general plant additions. In addition to new plant, rate base
20 additions attributable to CWIP are as follows: \$138 million for Cliffside Unit 6,
21 \$127 million for phase II of Oconee HELB, \$98 million for Dan River Combined
22 Cycle, \$90 million associated with Other Nuclear, Fossil, Hydro, and Combustion
23 Turbine projects and \$57 million associated with Transmission, Distribution, and
24 other General Projects. Including cost of capital, depreciation and property taxes,

1 gross plant additions to our generation and power delivery systems translate into
2 approximately \$191 million in additional annual revenue requirements.

3 Approximately \$9 million of our rate increase is due to employee benefits
4 cost increases. Our request also includes \$10 million annually for the next three
5 years for costs associated with the Company's Voluntary Opportunity Program that
6 provided a means for individuals to voluntarily leave our Company allowing us to
7 reduce labor and labor-related costs and pension settlement expense amortization.
8 The remaining increase in revenue requirements is due to additional financing and
9 other general costs explained in the testimony of Witnesses Shrum and McManeus.

10 **Q. CAN YOU PUT DUKE ENERGY CAROLINAS' RATES INTO**
11 **PERSPECTIVE?**

12 A. Yes. Duke Energy Carolinas has been able to hold prices well below the rate of
13 inflation since the early 1990s. In other words, customers are paying lower rates
14 today than they were in 1991 on an inflation-adjusted basis using the Consumer
15 Price Index ("CPI"). If retail rates had increased in lock-step with inflation,
16 customers would be paying average rates of more than 8.6 cents per kilowatt hour as
17 opposed to the approximately 6.6 cents they are paying today. The following chart
18 was prepared for me to demonstrate this significant difference:



1 Even after the requested rate increase, our rates will continue to be competitive in
2 the Southeast and below the national average. We believe that electricity in South
3 Carolina remains an excellent value, even with our proposed increase. From 1988 to
4 2008 (nominal dollars), basic consumer goods like gas and health care have more
5 than doubled in price. Food and beverages have increased by more than 80%.
6 However, as demonstrated above, the cost of electricity in South Carolina has not
7 seen such drastic increases, which is especially meaningful given the value provided
8 by electricity. Electricity provides so many practical benefits including powering
9 appliances, heating and cooling homes, and cooking food, and it allows us to use our
10 televisions, computers, and other such devices that are part of our everyday lives.

1 **Q. WHY DOESN'T THE COMPANY HALT ITS CAPITAL EXPENDITURES**
2 **UNTIL THE ECONOMY IS STRONGER?**

3 A. Several of our projects such as the construction of Cliffside Unit 6, the Cliffside
4 Unit 5 scrubber, and the Buck Combined Cycle project have been in process for a
5 number of years, and the need for these types of projects does not go away even
6 during a recession. As indicated in the 2010 Duke Energy Carolinas Integrated
7 Resource Plan ("IRP"), filed in Docket No. 2010-10-E ("2010 IRP"), the Company
8 must be prepared to meet new load growth in future years and address expected
9 plant retirements. Although the levels of growth may be less than we anticipated in
10 prior years, the Company expects to see growth over the long term and must be
11 ready to meet the electricity needs associated with it. Finally, the Company must
12 comply with environmental regulations regardless of the state of the economy, and
13 our modernization program allows us to meet that objective.

14 **Q. WILL DUKE ENERGY CAROLINAS RETIRE GENERATING UNITS AS**
15 **PART OF THE COMPANY'S MODERNIZATION PROGRAM?**

16 A. Yes. The 2010 IRP assumes the retirement of 370 megawatts ("MWs") of our
17 oldest (1960's vintage) combustion turbines, as well as the retirement of 1,667 MWs
18 of coal-fired generation, representing all of the Company's coal-fired generation
19 resources without installed flue gas desulfurization facilities (also known as "SO₂
20 scrubbers") by 2015. The projected coal retirements are driven by the conditions set
21 forth in the North Carolina Utilities Commission's *Order Granting Certificate of*
22 *Public Convenience and Necessity with Conditions* in Docket No. E-7, Sub 790

1 (March 21, 2007)² and the anticipated impact of a series of new proposed U.S.
2 Environmental Protection Agency (“EPA”) rules regulating multiple areas relating
3 to generation resources, such as mercury, SO₂, NO_x, coal combustion by-products
4 and fish impingement/entrainment. These new EPA rules, if implemented, will
5 increase the need for the installation of additional environmental control technology
6 or retirement of coal fired generation in the 2014 to 2018 timeframe. Although the
7 Company has not made a firm decision as to when this generation will be retired in
8 anticipation of these increased control requirements, the 2010 IRP incorporates a
9 planning assumption that all coal-fired generation that does not have an installed
10 SO₂ scrubber will be retired by 2015. Based on these assumptions, the 2010 IRP
11 assumes approximately 890 MW of coal-fired generation capacity will be retired
12 earlier than projected within the 2009 IRP. These units have provided reliable
13 service for our customers for many decades, but it is now appropriate to replace
14 them in the coming years with a new fleet of coal and natural gas facilities that
15 embrace new technology for higher efficiency, reduce our carbon footprint, and
16 minimize costs associated with obsolescence and maintenance of older equipment.

17 **Q. PLEASE DESCRIBE THE ENVIRONMENTAL COMPLIANCE**
18 **CHALLENGES FACING THE COMPANY AND HOW THE COMPANY IS**
19 **ADDRESSING THESE AND OTHER EMERGING CHALLENGES.**

20 A. Through our modernization program, we are still working to comply with the North
21 Carolina Clean Smokestacks Act and Phase 1 of the Federal Clean Air Interstate

² The Cliffside Order requires the retirement of the existing Cliffside Units 1-4 no later than the commercial operation date of the new unit, and retirement of older coal-fired generating units (in addition to Cliffside Units 1-4) on a MW-for-MW basis, considering the impact on the reliability of the system, to account for actual load reductions realized from the new energy efficiency (“EE”) and demand side management (“DSM”) programs up to the MW level added by the new Cliffside Unit 6.

1 Rule³ and that compliance requires considerable investment. We face uncertainty
2 regarding greenhouse gas regulation by the EPA which could require even more
3 substantial investments, as older fossil-fuel generating units are retired, new
4 generation sources are constructed, and new energy efficiency (“EE”) and demand-
5 side management (“DSM”) programs are put in place. Our current three year (2011-
6 2013) budget for projected capital expenditures for Duke Energy Carolinas is
7 approximately \$7.0 billion, which includes significant capital expenditures for the
8 Cliffside Unit 6 project and for new gas-fired generation units, in addition to on-
9 going environmental and Nuclear Regulatory Commission (“NRC”) compliance
10 costs and numerous other capital projects. Further, the 2010 IRP identified
11 approximately 2,200 MWs of additional resources that are needed by 2020. To meet
12 this challenge, we continue to pursue a diverse generation mix that includes
13 EE/DSM to meet customer demand, along with advanced nuclear and coal, natural
14 gas, and renewable energy. However, these resource needs may change, depending
15 on the uncertainties related to emission control regulations that could result in
16 additional retirements and/or earlier retirements of older units.

17 Duke Energy Carolinas, like many other utilities, is facing myriad other
18 challenges. We are facing cost uncertainty as we deal with rising health care and
19 pension costs, compliance costs for North American Electric Reliability Corporation

³ The EPA finalized its CAIR rule in May 2005. On July 11, 2008, however, the D.C. Circuit issued a decision in a challenge to the legality of the rule, in *North Carolina v. EPA* No. 05-1244, vacating the CAIR rule. The EPA filed a petition for rehearing on September 24, 2008 with the D.C. Circuit asking the court to reconsider various parts of its ruling vacating CAIR. In December of 2008, the D.C. Circuit issued a decision remanding the CAIR to EPA without vacatur. The court required EPA to conduct a new rulemaking to modify the CAIR in accordance with the court’s July 11, 2008 opinion. This decision means that the CAIR as initially finalized in 2005 remains in effect until the new EPA rule takes effect. On July 6, 2011, EPA promulgated the CSAPR, to replace CAIR. CSAPR has two phases. The first phase begins January 1, 2012 for SO₂ and annual NO_x reductions and May 1, 2012 for ozone season NO_x reductions. The second phase begins January 1, 2014 for SO₂ and annual NO_x reductions and May 1, 2014 for ozone season NO_x reductions. The emission controls Duke Energy Carolinas is installing to comply with state specific clean air legislation contribute significantly to achieving compliance with CAIR and CSAPR requirements.

1 requirements, cybersecurity concerns, volatile financial markets, potential cost
2 increases for nuclear compliance costs, digital delivery system readiness and
3 modernization, and a workforce that is rapidly approaching retirement age.

4 **Q. HOW DOES TIMELY RECOVERY OF ITS INVESTMENTS HELP THE**
5 **COMPANY TO ADDRESS ITS BUSINESS CHALLENGES?**

6 A. As explained in detail by Witness De May, the credit rating agencies and investors
7 view the Company's ability to obtain timely cash recovery on prudently incurred
8 costs as a major factor in their assessment of financial strength and credit quality.
9 Strong credit ratings and credit quality enable the Company to access the substantial
10 capital it needs to replace aging and retired infrastructure, to comply with
11 environmental requirements, and to invest in new, more efficient technologies on
12 reasonable terms for the benefit of our customers.

13 Although in 2009 the settling parties agreed to an overall allowed return on
14 equity ("ROE") of 11.0%, the Company earned 9.52% in 2010 as reported to the
15 Commission in our SC Quarterly report for the twelve months ended December 31,
16 2010. This 9.52% ROE includes the benefit of extreme weather. Absent the sales
17 that occurred from extreme weather, the Company's actual ROE would have been
18 significantly less under current rates, and the Company expects a further decline in
19 its ROE for 2011 due to its continued costs of replacing and refurbishing our
20 generation and power delivery resources.

21 The Company needs to maintain its sound financial position for the benefit
22 of both its customers and investors. The ability to earn a fair and reasonable ROE
23 will help ensure access to capital markets, especially in uncertain financial markets.

24 Witness Hevert explains his assessment of the return on equity that the Company

1 will need to provide to investors to continue to obtain this type of financing, and
2 recommends that the Commission authorize an 11.5% ROE. We must remain
3 competitive with other utilities in attracting financing, which is one of the reasons
4 we are asking for an increase in the ROE.

5 **IV. MITIGATION EFFORTS**

6 ***A. General Efforts***

7 **Q. PLEASE DESCRIBE THE COMPANY'S EFFORTS TO LESSEN THE**
8 **IMPACT OF THE PROPOSED RATE INCREASE?**

9 A. Although we are facing significant cost pressures, we continue to challenge
10 ourselves to find ways to provide more efficient and cost-effective service to our
11 customers. We have worked throughout the Company to limit our overall non-fuel
12 operation and maintenance ("O&M") expenses since the economic downturn in
13 2008. In fact, we had successive O&M challenges in 2008, 2009 and 2010, which
14 enabled the Company to maintain a relatively flat level of O&M expenses through
15 this period. Despite the fact that we work to be prudent managers of expenses, it
16 will be difficult to sustain our mission of providing reliable service without some
17 increase in these O&M expenses.

18 We have also worked hard to improve the efficiency of our generating fleet
19 so that it is among the most efficient in the nation, including continuing our efforts to
20 optimize the time between planned outages and to increase the time plants are
21 available to provide electricity for customers. As Witness Jamil testifies, 2010 was
22 an exceptional year for the Company's plant operations. The Company's
23 "Equivalent Availability Factor," an industry measure for availability of power
24 plants, was 86.3 percent in 2010 for fleet-wide coal-fired plants, compared to the

1 national average of 84.2 percent. A measure of plant performance, “BTU/kWh” was
2 9,656 for the coal fleet in 2010, and 9,336 for Belews Creek which ranked as the
3 country’s third most efficient plant. Our nuclear fleet experienced a record capacity
4 factor of 95.88 percent in 2010. This was the eleventh consecutive year our fleet
5 capacity factor exceeded 90 percent. Duke Energy Carolinas’ nuclear fleet was the
6 lowest cost fleet (total operating cost) for the third consecutive year. These
7 operational efforts resulted in significant cost savings for our customers on their total
8 bill.

9 In 2010, we sought to control our human resources expenses in a way that
10 does not compromise service to our customers. We offered a Voluntary Opportunity
11 Plan to our employees to reduce labor costs. The plan was offered to approximately
12 8,750 employees and approximately 900 employees accepted. The departure dates
13 for employees were staggered to manage impact to the business. In addition, we
14 consolidated and eliminated other positions where possible. As a result of these
15 efforts, we have been able to reduce the size of our workforce while continuing to
16 provide a safe and reliable supply of electricity to our customers.

17 ***B. Bill Management***

18 **Q. DOES THE COMPANY OFFER ANY PROGRAMS TO HELP**
19 **CUSTOMERS MANAGE THEIR BILLS?**

20 A. Yes, Duke Energy Carolinas offers several optional bill management programs to
21 help meet our customers’ varied needs. The programs are briefly described
22 below.

- 23 • *Equalized Payment Program* – This program helps customers manage
24 their monthly energy costs by setting a monthly billing amount based on

1 an average annual cost. Customers have the option of having their bills
2 adjusted quarterly or annually to reflect actual usage.

- 3 • *Extended Payment Agreements* – Duke Energy Carolinas offers extended
4 payment plans to eligible customers who are having difficulty paying their
5 entire bill by the due date. During a twelve month period, residential
6 customers may be eligible for one extension of up to six months.

- 7 • *Share the Warmth, Cooling Assistance, and Fan Heat Relief* – These
8 energy assistance programs are available to eligible Duke Energy
9 Carolinas customers who need financial assistance with their electric bills.
10 The programs are independently administered by 80 preselected agencies.
11 Share the Warmth is completely funded by Duke Energy Carolinas
12 employees, customers, and shareholders. For 2010, Duke Energy
13 Carolinas and its employees provided total funding to the program in
14 excess of \$2.4 million. In addition, through AdvanceSC, the Company
15 contributed an additional \$500,000 to these programs from its bulk power
16 marketing sales as I describe later.

17 The Company also offers a number of bill payment options for customers in
18 addition to the traditional bill payment option via U.S. mail including Automatic
19 Payment Plan, Speedpay and Paperless Billing.

20 *C. Energy Efficiency*

21 **Q. IN ADDITION TO BILLING AND PAYMENT OPTIONS, DOES THE**
22 **COMPANY OFFER PROGRAMS TO HELP CUSTOMERS USE LESS**
23 **ENERGY AND THEREBY LOWER THEIR BILLS?**

1 A. Yes. In addition to working hard to manage our costs and keep our rates
2 competitive, we also recognize that one of the best ways we can help our customers
3 who are struggling financially is to help them better manage their electric usage. We
4 offer customers Residential Energy Assessments, a Home Energy Comparison
5 Report, a Residential Retrofit pilot, and various incentives through our Residential
6 Smart Saver® and Power Manager programs. These programs enable residential
7 customers of all income levels to reduce their monthly electric bills.

8 For example, in 2010, approximately 230,000 orders were placed by our
9 South Carolina customers for compact fluorescent light bulbs (CFLs) through our
10 Residential Smart Saver® program. We experienced high participation across the
11 entire residential population, including low income and rental customers who
12 traditionally have been more difficult to reach. This accomplishment was possible
13 due to the Company's outreach to and partnership with renters and property
14 managers. Notably, these 230,000 orders equate to about 1,900,000 CFLs and
15 110,400 megawatt hours saved.

16 **Q. HAVE NON-RESIDENTIAL CUSTOMERS ALSO BENEFITED FROM**
17 **PARTICIPATING IN THE COMPANY'S ENERGY EFFICIENCY**
18 **PROGRAMS?**

19 A. Yes. Through the Company's Smart Saver Prescriptive and Smart Saver Custom
20 programs, our non-residential customers have realized significant efficiency gains as
21 well. In 2010, Duke Energy Carolinas paid incentives totaling approximately
22 \$4,326,000 for over 326,000 measures installed as part of the Smart Saver
23 Prescriptive program. The customer impacts on the Duke Energy Carolinas system
24 from these measures totaled approximately 56,600 megawatt hours of energy

1 reduction and 14.5 megawatts of peak demand reduction. In addition, participation
2 in the Smart Saver Custom program in 2010 led to incentive payments by the
3 Company of over a million dollars for custom applications generating further energy
4 reductions of approximately 20,900 megawatt hours and peak demand reductions of
5 2.6 megawatts on the Carolinas system.

6 **Q. IS THE COMPANY SEEKING TO BE COMPENSATED FOR ITS ENERGY**
7 **EFFICIENCY AND DEMAND-SIDE MANAGEMENT PROGRAMS IN**
8 **THIS PROCEEDING?**

9 A. No. The Company is compensated for its portfolio of energy efficiency and
10 demand-side management programs through Rider EE, which is subject to a separate
11 annual proceeding.

12 ***D. Economic Development Activities***

13 **Q. DO THE COMPANY'S ECONOMIC DEVELOPMENT EFFORTS**
14 **BENEFIT ITS CUSTOMERS?**

15 A. Yes. Duke Energy Carolinas has a long history of supporting the economic
16 development of South Carolina. Our first generating plants and transmission and
17 distribution grid were built over a hundred years ago to fuel industrial development
18 in the Carolinas. Our sales and profits are inextricably tied to the economic success
19 of our service area. Recent history demonstrates this connection. The changing
20 composition of the economies of South Carolina and North Carolina has resulted in
21 losses of manufacturing jobs and business in the Company's service area. In
22 response, Duke Energy Carolinas has continued various programs to stimulate new
23 industrial development in its service area, including its Economic Development and
24 Economic Redevelopment Riders, which offer credits for customers locating new

1 load on the Duke Energy Carolinas system. Most of that effort has been aimed at
2 encouraging new industrial investments. Also, through the BPM sharing program,
3 the Company has provided significant assistance to economic development efforts,
4 and economic development-related educational initiatives to assist existing and new
5 customers. As a result of sustained economic development efforts in South Carolina
6 over the past decade, South Carolina is positioned for future growth and success.

7 We believe strongly that a healthy industrial base is good for all of our
8 customers. A healthy and broad industrial customer base enables us to spread our
9 fixed costs over a broader group of customers, thereby ensuring that prices are
10 lower, on average, for all customers. Also, as new manufacturing businesses are
11 established and existing manufacturing businesses expand, they typically create a
12 significant multiplier effect that directly and indirectly produces additional jobs and
13 investments. In light of the current economic recovery, our focus on economic
14 development – targeted towards potential for new and existing customers – is more
15 important than ever to maintain the competitiveness of our region. We are confident
16 that our sustained economic development efforts will continue to provide positive
17 results here in South Carolina. In addition, we remain committed to maintaining
18 competitive rates for our customers over the long term.

19 **Q. PLEASE DISCUSS SOME OF THE RESULTS IN SOUTH CAROLINA OF**
20 **DUKE ENERGY CAROLINAS' ECONOMIC DEVELOPMENT**
21 **ACTIVITIES.**

22 **A.** Our support for state and local economic development efforts, combined with our
23 competitive electric rates, has produced a number of South Carolina economic
24 development successes in which Duke Energy Carolinas has played a part. In 2010

1 alone, we estimate that our cooperative efforts with state and local economic
2 development officials have contributed to the creation of more than 5,200 South
3 Carolina jobs and over \$1.6 billion of capital investment in South Carolina. Also in
4 2010, Duke Energy Carolinas was named one of the “Top 10 Best” utility economic
5 development programs by *Site Selection* magazine, a recognition we earned for the
6 12th straight year.

7 South Carolina’s competitive advantages – a quality workforce, strong
8 educational institutions, superior transportation infrastructure, and competitive
9 energy rates – have been key factors in the state’s ability to attract significant new
10 businesses in the financial, electronics manufacturing, plastics, biopharmaceuticals,
11 medical equipment, and automotive parts industries. These economic development
12 successes continue to help offset the loss of jobs (and customers of Duke Energy
13 Carolinas) in the textile industry.

14 **V. ADVANCE SC**

15 **Q. DOES THE COMPANY HAVE ANY OTHER PROGRAMS THAT**
16 **BENEFIT THE PEOPLE AND ECONOMY OF SOUTH CAROLINA?**

17 A. Yes, in 2004, Duke Energy established AdvanceSC. AdvanceSC is funded from the
18 Company’s bulk power marketing (BPM) sharing program and is operated under the
19 direction of an independent board. It was created to support communities in the
20 Company’s South Carolina service territory through grants for public assistance and
21 economic development programs. In general, AdvanceSC focuses on advancing
22 education to support industry, assisting other economic development organizations

1 to attract and retain industries in our South Carolina service territory, and enhancing
2 the competitive position of manufacturers in our South Carolina service territory.

3 **Q. PLEASE DESCRIBE THE COMPANY'S BPM SHARING PROGRAM.**

4 A. Duke Energy Carolinas provides funding for AdvanceSC with 50% of the South
5 Carolina allocation of profits from BPM sales of electricity. BPM sales are non-
6 firm, short-term, wholesale sales made from the Company's generation resources
7 when they are not needed to serve its firm, native load customers. The
8 Commission's *Order Approving Increase in Electric Rates and Charges* in Docket
9 No. 2009-226-E, Order No. 2010-79 provided that the Company would extend its
10 sharing of non-firm BPM profits until the Company's next rate case, or through
11 December 31, 2015, whichever occurs first. Duke Energy Carolinas proposes to
12 increase the period of time over which it will make contributions to AdvanceSC for
13 an additional five years following the effective date of the order in this case.

14 **Q. HOW DOES ADVANCE SC USE THE FUNDS RECEIVED FROM DUKE**
15 **ENERGY CAROLINAS' BPM SHARING PROGRAM?**

16 A. AdvanceSC utilizes the shared BPM funds from Duke Energy Carolinas to fund (1)
17 public assistance programs, (2) a manufacturing competitiveness fund, (3) economic
18 development initiatives, and (4) workforce training programs in South Carolina.

19 More specifically, funding is first allocated to help fund Duke Energy's
20 "Share the Warmth," "Cooling Assistance," and "Fan Heat Relief" programs. Once
21 these public assistance program funding requirements are met, the remaining funds
22 are divided among the manufacturing competitiveness (50%), economic
23 development (25%), and education (25%) programs.

1 Heigel Exhibit 1 is a copy of AdvanceSC's 2010 performance report, which
2 provides greater detail about AdvanceSC's activities and achievements.

3 **Q. WHY IS THE COMPANY PROPOSING TO EXTEND ITS BPM SHARING**
4 **PROGRAM?**

5 A. In our view, the BPM sharing program has provided significant benefits for
6 customers through the activities of AdvanceSC, while at the same time providing an
7 incentive for the Company to maximize short-term opportunistic (and inherently
8 unpredictable) wholesale sales. For example, since the sharing arrangement was
9 implemented, contributions to AdvanceSC have ranged from \$24 million for the
10 year 2005 to a low of \$1.1 million for the year 2009. We believe that it makes sense
11 to share these BPM profits with AdvanceSC, as the Company has done successfully
12 for several years now, in order to stimulate economic development and workforce
13 education in our region while at the same time assisting those most in need. In sum,
14 the BPM sharing program has a proven track record of aligning Company and
15 customer interests for the benefit of the SC communities we serve. Therefore, we
16 believe the Commission should authorize the Company to continue the profit sharing
17 arrangement for an additional five year period.

18 **VI. CUSTOMER SERVICE**

19 **Q. WHAT IS DUKE ENERGY CAROLINAS' GOAL WITH RESPECT TO**
20 **CUSTOMER SERVICE AND SATISFACTION?**

21 A. Our continuing challenge is to achieve operational excellence in both customer
22 service and reliability while also managing to keep our costs and rates low.

1 **Q. PLEASE DESCRIBE DUKE ENERGY CAROLINAS' CUSTOMER**
2 **SERVICE EFFORTS.**

3 A. We strive to provide customers a variety of convenient methods to interact with
4 us. We work to manage and reduce customer service costs by leveraging new
5 technology and new customer service channels.

6 In 2010, we handled more than 14 million calls from customers in the
7 Carolinas through automated and live voice channels. This is an increase in calls
8 of 20% over the 2008 test year used in the last rate case. Since customers are
9 taking advantage of our web and phone service to address their needs, the phone
10 calls the Company receives often address more complex issues, such as questions
11 on rate offerings, energy efficiency programs, or other issues in addition to the
12 usual calls regarding service orders, requests for billing and payment information,
13 and electric trouble calls. Our call center representatives have been able to
14 resolve the vast majority of calls correctly the first time with no follow-up calls
15 required by the customer. The performance of our customer service
16 representatives is monitored on an ongoing basis by call center team leads and
17 supervisors.

18 The calls described above are handled by approximately 325 customer
19 service representatives in two call center locations and 45 agents in our “agents at
20 home” program. Those numbers include approximately 40 employees added
21 since the 2009 Rate Case to respond to the increase in customers calls described
22 above. In addition, our sourcing partner, ERS, located in Atlanta, Georgia and
23 Montgomery, Alabama, takes approximately 35% of total live voice call volume
24 for the Carolinas. Our arrangement with ERS achieves a lower overall cost

1 structure and provides added means to deal with peak call volumes, especially
2 during storms. During outages resulting from extreme weather, we enlist the
3 support of Duke Energy Carolinas employees outside of the customer service
4 organization. We also leverage our customer service representatives in the
5 Midwest who have been trained to respond to Carolinas' customer outage calls for
6 significant storms. In addition, "Storm Center" on the web is an online customer
7 service improvement we have made since the 2009 Rate Case that allows
8 customers to see the locations and number of electric outages during severe
9 weather. That same enhancement also allows customers to report street light
10 outages.

11 Other customer service channels include our Business Service Centers for
12 commercial, industrial and institutional customers which enable business
13 customers to handle their basic utility needs online and in one place. In addition,
14 the Company offers residential customers the opportunity to pay their bills at
15 various locations with Pay Agents, who are local authorized retailers or agents
16 that accept Duke Energy Carolinas bill payments, often at extended hours. We
17 also offer all customers our Automated Phone Service and enhanced web
18 functionality through Online Services which includes new tools allowing
19 customers to better analyze how external factors, such as weather, impact their
20 energy usage. These web tools also offer customers a sense of which appliances
21 in their homes are likely driving their energy usage and help resolve billing
22 inquiries. Access to Online Services tools by Duke Energy Carolinas residential
23 customers averages 360,000 log-ins per month. Customers can take advantage of
24 a number of online opportunities that include the capability to view and pay their

1 bill, pursue a more detailed energy audit, receive a Personalized Energy Report,
2 and submit online requests for tree trimming. The number of customers paying
3 their bills electronically has increased significantly since the 2009 Rate Case. For
4 each month from January through June of 2011, electronic payments exceeded the
5 number of mail-in payments. The Personalized Energy Report, referred to above,
6 continues to be enhanced to provide customers with the necessary energy usage
7 information and energy savings tips that will enable them to effectively manage
8 their energy consumption and potentially lower their monthly bills.

9 Our customer satisfaction survey results indicate we are meeting our
10 customers' needs and that we compare favorably to utilities in the Southeast and
11 nationwide.

12 **Q. TO WHAT DO YOU ATTRIBUTE DUKE ENERGY CAROLINAS'**
13 **FAVORABLE CUSTOMER SATISFACTION?**

14 A. Since being named President of Duke Energy Carolinas for South Carolina in March
15 2010, I have met with numerous key customers, customer groups, and other
16 stakeholders. As I travelled the state and met with our customers, again and again
17 customers have acknowledged our competitive rates, our reliability, our
18 responsiveness, and our willingness to partner with them to improve the energy
19 efficiency of their operations. In addition, customers have expressed appreciation
20 for the proactive way in which we engage them about the issues and challenges
21 affecting our business.

22 Further, we have been able to offer creative solutions to customers'
23 operating issues. As I discuss further below, this ingenuity combined with the

1 availability of funds through AdvanceSC provides us with the opportunity to assist
2 in improving the competitive position of our large business customers. For our
3 smaller customers, I believe our customer service success is linked to the myriad
4 customer service channels we provide customers, as well as the rapid response of
5 our representatives. Our goal is to provide customer service access that is easy to
6 use and low cost for both the customers and the Company.

7 **Q. HAVE EXTERNAL PARTIES RECOGNIZED DUKE ENERGY FOR ITS**
8 **EFFORTS IN CUSTOMER SERVICE?**

9 A. Yes. National benchmark studies conducted by third parties provide important
10 measures of customer satisfaction with our performance. Duke Energy has
11 consistently rated very well in TQS Research, Inc.'s Key Account National
12 Benchmark study. In 2010, Duke Energy Carolinas earned this rating with an
13 overall customer satisfaction score of 92.3%. This study gauges the satisfaction of
14 our largest customers - manufacturers, large hospitals, and four-year universities - in
15 several areas, including overall satisfaction, reliability, price, power quality, and
16 account management.

17 Another important measure of our success in this area is the annual electric
18 utility customer satisfaction studies conducted by J.D. Power and Associates ("J.D.
19 Power"), a firm well known for setting the standard of consumer opinion and
20 customer satisfaction studies in many key industries. J.D. Power performs annual
21 studies of electric utilities' residential and business customer satisfaction. Duke
22 Energy Carolinas is included in both of these annual studies, and the results indicate
23 that we are doing an outstanding job of consistently providing high quality customer
24 service.

1 The J.D. Power residential customer study, established in 1999, calculates
2 overall customer satisfaction based on six performance areas: (1) corporate
3 citizenship, (2) price, (3) power quality and reliability, (4) billing and payment, (5)
4 customer service, and (6) communications. Since the J.D. Power residential study
5 has been conducted, Duke Energy Carolinas' scores in overall satisfaction have
6 consistently outperformed the scores of the industry average and the South region
7 average for large utilities. In the past six years, Duke Energy has twice ranked #1 in
8 the large utility, South segment (2005 and 2010). For 2011, Duke Energy Carolinas
9 again ranked in the Top Quartile nationally in the large utility segment for overall
10 residential customer satisfaction. J.D. Power also conducts an annual survey of
11 business customers using the same six performance areas that are used in the
12 residential study and Duke Energy Carolinas consistently has also exceeded the
13 scores of the industry average and the South region average for large utilities in
14 overall satisfaction. In the 2011 study, Duke Energy Carolinas ranked 2nd of 10
15 utilities in the large utility, South segment, an improvement from 4th place in 2010.
16 Nationally, Duke Energy ranked 4th out of 47 large utilities.

17 Although these results indicate Duke Energy Carolinas is consistently
18 providing high quality customer service, the Company is aware that changing
19 conditions that affect certain components of customer satisfaction, such as rate
20 increases, storm response and high bills from extreme weather, can have a negative
21 impact on overall customer satisfaction. As a result, Duke Energy Carolinas
22 continues to strive for a better understanding of customer expectations in order to
23 improve the overall customer experience and ensure the Company will continue to
24 rank highly in customer surveys.

1 **Q. YOU MENTION PROACTIVE CUSTOMER ENGAGEMENT ABOUT**
2 **ISSUES AFFECTING DUKE ENERGY CAROLINAS AS BEING**
3 **IMPORTANT TO CUSTOMER SATISFACTION. DID THE COMPANY**
4 **DO ANY OUTREACH WITH CUSTOMERS CONCERNING THIS RATE**
5 **INCREASE REQUEST?**

6 A. Yes. Earlier this year, we initiated an outreach campaign using our district
7 managers, business customer relationship managers, economic development
8 managers, lobbyists and even myself to inform our residential, commercial and
9 industrial customers about our plans to file a rate case and the primary drivers
10 behind the filing. This campaign ranged from individual meetings with large
11 customers and legislators to group meetings with local chambers of commerce and
12 economic development boards. In these meetings, we invited questions and
13 reiterated our commitment to a “no surprises” approach to communicating with our
14 customers about tough issues. In total, we spoke to more than 4800 customers at
15 over 250 different events prior to filing our Application. We successfully reached
16 customers in every county and every major city of our South Carolina service area.

17 **Q. HOW DID CUSTOMERS RESPOND TO THIS CAMPAIGN?**

18 A. Generally speaking, customers appreciated the Company’s transparency and
19 willingness to communicate face-to-face regarding the filing. Although we could
20 not provide an increase percentage at most of our meetings, local government
21 leaders especially appreciated the advance notice of a proposed rate increase and the
22 explanation of the drivers for the increase as they began their own budget
23 discussions for the coming fiscal year. Elected officials have welcomed our

1 outreach as an opportunity to gain insight and knowledge on a subject that often
2 generates constituent questions. Our outreach campaign continues to facilitate open
3 dialogue and meaningful discussions between the Company and our customers.
4 Attached as Heigel Exhibit 2 is a copy of the presentation used with customers.

5 **VII. CONCLUSION**

6 **Q. MS. HEIGEL, WHY IS IT IMPORTANT THAT DUKE ENERGY**
7 **CAROLINAS BE GRANTED THIS RATE INCREASE?**

8 A. Simply stated, our revenues must cover all of our costs necessary to provide safe,
9 reliable, and economically priced electricity to our customers. Our current rates are
10 insufficient to meet these objectives and therefore a rate increase is required. If we
11 are to continue to carry out our obligation to provide safe, reliable, and economically
12 priced electricity to our customers and to build the infrastructure needed to provide
13 the energy for South Carolina's future growth, our revenues must cover all of our
14 costs, including a return on investment that will enable us to raise on reasonable
15 terms the large amounts of capital required by the Company's capital project plans.

16 **Q. WERE HEIGEL EXHIBITS 1 AND 2 PREPARED BY YOU OR UNDER**
17 **YOUR SUPERVISION AND DIRECTION?**

18 A. Yes.

19 **Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?**

20 A. Yes, it does.